Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently amended) A purification device comprising:

a filter, the filter comprising

a filter body that includes an interior,

a first filter connector in fluid communication with the interior, and

at least one ribonucleic acid-capturing (RNA-capturing) membrane disposed within the interior;

a removable vacuum adapter plate comprising a substrate including a first surface, a second surface, one or more through-holes extending at least from the first surface to the second surface, and a set of first plate connectors extending from the first surface, disposed in fluid communication with the one or more through-holes; and

~~a connectable collection vessel~~ a collection plate comprising a plurality of through holes accommodating a respective plurality of collection vessels;

wherein the first filter connector is capable of connecting to the vacuum adapter plate via the set of first plate connectors to form a leak-free fluid communication from the interior of the filter through a respective one of the one or more through-holes ~~to the connectable collection vessel~~ and the collection vessels accommodated by the through-holes in the collection plate are disposed to receive fluids respectively from the one or more through-holes in the removable vacuum adapter plate.

2. (Original) The purification device of claim 1, wherein the first filter connector extends away from the filter body.

3. (Original) The purification device of claim 1, wherein each of the one or more through-holes further comprises a tubular connector that extends away from the substrate.

4. (Original) The purification device of claim 1, further comprising a sample reservoir device that includes a connector capable of connecting the sample reservoir device to the filter to form a fluid communication between the sample reservoir device and the filter.

5. (Original) The purification device of claim 4, further comprising one or more blood-treatment components disposed in the sample reservoir device.

6. (Original) The purification device of claim 4, further comprising one or more blood-treatment reagents disposed in the sample reservoir device.

7. (Original) The purification device of claim 4, further comprising a lysing reagent, a blood-stabilizing reagent, and an anti-coagulant, disposed in the sample reservoir device.

8. (Original) The purification device of claim 4, further comprising a lysing reagent disposed in the sample reservoir device.

9. (Original) The purification device of claim 4, further comprising a blood-stabilizing reagent disposed in the sample reservoir device.

10. (Original) The purification device of claim 4, further comprising a whole blood sample disposed in the sample reservoir device.

11. (Original) The purification device of claim 4, wherein the filter body further comprises a second filter connector disposed on an opposite side of the filter body relative to the first filter connector.

12. (Original) The purification device of claim 8, wherein the sample reservoir device includes a reservoir connector, and the second filter connector and the reservoir connector are capable of connecting to each other to form a fluid communication therebetween.

13. (Original) The purification device of claim 4, wherein the sample reservoir device comprises a syringe body.

14. (Original) The purification device of claim 1, further comprising a filter frit disposed in the interior of the filter body adjacent the RNA-capturing membrane.

15. (Original) The purification device of claim 1, wherein the filter body comprises a syringe body.

16. (Original) The purification device of claim 1, wherein the at least one RNA-capturing membrane comprises a plurality of RNA-capturing membranes.

17. (Original) The purification device of claim 1, wherein the plurality of through-holes comprises from about four to about eight through-holes.

18. (Original) The purification device of claim 1, wherein the RNA-capturing membrane is porous and has an average pore size diameter of from about 1 micron to about 10 microns.

19. (Original) The purification device of claim 1, wherein the at least one RNA-capturing membrane comprises a hydrophobic membrane.

20. (Original) The purification device of claim 19, wherein the hydrophobic membrane comprises a glass fiber membrane.

21. (Original) The purification device of claim 14, wherein the filter frit is porous and has an average pore size diameter of from about 20 microns to about 100 microns.

22. (Original) The purification device of claim 14, wherein the filter frit comprises a plastic material.

23. (Original) The purification device of claim 14, wherein the filter frit comprises a polyethylene material.

24. (Original) The purification device of claim 1, wherein the vacuum adapter plate further comprises a drip director extending away from the second surface of the substrate disposed in fluid communication with a respective one of the one or more through-holes.

25. (Original) The purification device of claim 24, wherein the drip director includes at least a portion that is conical.

26. (Previously presented) The purification device of claim 2, wherein the first filter connector comprises a locking fitting lockable with at least one of the set of first plate connectors.

27. (Previously presented) A purification system comprising:

the purification device of claim 1,

wherein the first filter connector is connected to a respective one of the set of first plate connectors, and the purification system further comprises:

a vacuum source; and

a vacuum manifold connected to the vacuum source;

wherein the second surface of the vacuum adapter plate is operatively disposed in the vacuum manifold such that in operation a pressure gradient is created across the RNA-capturing membrane.

28. (Original) The purification system of claim 27, further comprising a seal disposed between the vacuum manifold and the vacuum adapter plate.

29. (Currently amended) The purification system of claim 27, ~~further comprising at least one~~ collection ~~vessel~~ plate is disposed in the vacuum manifold and arranged to receive fluids drawn through the one or more through-holes.

30. (Currently amended) A kit, comprising:

at least one filter, the at least one filter comprising;

a filter body that includes an interior,

a first filter connector in fluid communication with the interior, and

at least one ribonucleic acid-capturing (RNA-capturing) membrane disposed within the interior;

at least one syringe body having an interior volume of at least about 5 ml and including a connector capable of forming a fluid communication with the first filter connector;

at least one syringe body having an interior volume of at least about 20 ml and including a connector capable of forming a fluid communication with the first filter connector; ~~and~~

a removable vacuum adapter plate comprising a substrate, at least one through-hole extending through the substrate, and a first plate connector extending from the substrate and capable of forming a fluid communication with the first filter connector; and

a collection plate comprising a plurality of through holes accommodating a respective plurality of collection vessels, wherein the collection vessels accommodated by the through-holes in the collection plate are disposed to receive fluids respectively from the at least one through-hole in the removable vacuum adapter plate.

31. (Original) The kit of claim 30, further comprising a container and one or more blood-treatment components disposed in the container.

32. (Original) The kit of claim 30, further comprising a container and a lysing reagent disposed in the container.

33. (Original) The kit of claim 30, further comprising a container and a blood-stabilizing reagent disposed in the container.

34. (Canceled).

35. (Original) The kit of claim 30, wherein the at least one through-hole comprises a plurality of through-holes, and the kit further comprise at least one through-hole sealing device.

36. (Original) The kit of claim 30, wherein the at least one filter comprises from about four to about eight filters.

37. (Original) The kit of claim 30, wherein the at least one syringe body having an interior of about 5 ml comprises at least twelve syringe bodies each having an interior volume of at least about 5ml.

38. (Currently amended) A method, comprising the steps of:

providing at least one filter including an interior, a sample introduction opening in fluid communication with the interior, an output opening in fluid communication with the interior, and an RNA-capturing membrane disposed in the interior;

providing a removable vacuum adapter plate comprising a substrate having a first surface, a second surface, one or more through-holes extending at least from the first surface to the second surface, and a set of first plate connectors extending from the first surface and disposed in fluid communication with the one or more through-holes, wherein the sample introduction opening is connected to a respective one of the one or more through-holes via the set of first plate connectors such that a leak-free fluid communication is provided between the at least one filter, and the vacuum adapter plate ~~and a connectable collection container~~;

introducing a sample containing whole blood cells including ribonucleic acid (RNA) through the sample introduction opening and into the interior of the filter;

contacting the sample with the RNA-capturing membrane; ~~and~~

causing capturing of the RNA in the sample to the RNA-capturing membrane while vacuuming the sample out of the filter;

providing a collection plate underneath the removable vacuum adapter plate, the collection plate comprising a plurality of through holes and a respective plurality of collection vessels accommodated by the plurality of though holes; and

eluting the captured RNA off of the RNA-capturing membrane and into the plurality of collection vessels.

39. (Original) The method of claim 38, further comprising washing the sample, excluding the captured RNA, off of the RNA-capturing membrane.

40. (Canceled)

41. (Canceled)

42. (Original) The method of claim 40, further comprising drying the RNA-capturing membrane prior to eluting the captured RNA.

43. (Original) The method of claim 40, wherein eluting the captured RNA comprises creating a pressure gradient across the RNA-capturing membrane.

44. (Original) The method of claim 38, further comprising pre-wetting the RNA-capturing membrane before causing the capturing of the RNA in the sample to the RNA-capturing membrane.

45. (Original) The method of claim 38, wherein introducing the sample comprises creating a pressure gradient across the at least one filter.

46. (Original) The method of claim 39, wherein washing the sample comprises creating a pressure gradient across the RNA-capturing membrane.

47. (Original) The method of claim 38, wherein the sample introduced has a volume of from about five ml to about 20 ml.

48-54. (Canceled)